

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 10 APR 2006

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Applicant's or agent's file reference POWEG/P32461PC	FOR FURTHER ACTION <div style="text-align: right;">See Form PCT/IPEA/416</div>	
International application No. PCT/GB2005/000481	International filing date (<i>day/month/year</i>) 11.02.2005	Priority date (<i>day/month/year</i>) 11.02.2004
International Patent Classification (IPC) or national classification and IPC INV. B65D49/08		
Applicant WEBB, Mark Otto et al.		
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 7 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> <i>sent to the applicant and to the International Bureau</i> a total of 4 sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).		
4. This report contains indications relating to the following items: <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application </div>		
Date of submission of the demand 09.09.2005	Date of completion of this report 07.04.2006	
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div>	Authorized officer Seegerer, H Telephone No. +49 89 2399-8201	



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/GB2005/000481

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-15 as originally filed

Claims, Numbers

1-18 filed with telefax on 09.08.2005

Drawings, Sheets

1/18-18/18 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
 4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☒ the claims, Nos. 18
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2005/000481

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 18

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☒ the claims, or said claims Nos. 18 are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2005/000481

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-17
	No: Claims	
Inventive step (IS)	Yes: Claims	1-17
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-17
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item I /Re Item III

**Basis of the report and non-establishment of opinion with regard to novelty,
inventive step and industrial applicability**

New independent claim 1 filed with the telefax dated 09.08.2005 is based on claims 1 and 2 as originally filed wherein further clarifications are comprised (for clarifying the structure of the claimed closure) which are considered acceptable under Articles 19(2) and 34(2)(b) PCT in view of the figures as originally filed. However, new claim 18 (also filed with the telefax dated 09.08.2005) defining a "lift valve" sealing member introduces subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT, in particular since the term "lift valve" is not supported by the description of the application.

In accordance with Rule 70.2(c) PCT, this report has been established as if said unallowable amendment (new claim 18) had not been made; i.e. new claim 18 is not comprised in the statements under Item V of this report (non-establishment of opinion with regard to novelty, inventive step and industrial applicability).

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

V.1) Reference is made to the following documents:

- D1: US-A-5 927 556 (MOONEY ET AL) 27 July 1999 (1999-07-27)
- D2: WO 03/059752 A (JEON, GYEONG-JIN) 24 July 2003 (2003-07-24)
- D3: US-A-2 262 115 (PATTERSON JOSEPH ARTHUR) 11 November 1941 (1941-11-11)

V.2) Claims 1-17

Remark: claim 18 is not comprised in the following statements (cf. Items I,III)

V.2.1) Independent claim 1

- Novelty: The document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and discloses a closure according to the preamble of claim 1; i.e. "a (safety) closure for a container" comprising a "closure member" (cf. D1, fig.3, ref. 20) and a "key member" (cf. D1, fig.3, ref. 50) wherein said closure member according to D1 also includes an "opening/conduit" as claimed (cf. D1, fig.3, ref. 30) which communicates with a "concealed sealing member" (cf. D1, fig.3, movable valve rod ref. 41) which is (spring-based) biased towards the "closed position". Furthermore, the closure member ref. 20 of D1 comprises an "access channel" (cf. D1, fig.3, chamber ref. 29 housing said valve rod/sealing member and being, thus, in communication with the sealing member as claimed); said channel ref. 29 is engaged by an "engagement portion" of the key member ref. 50 (cf. D1, fig.3, releasable actuating button ref.56) in order to "move the sealing member into the open position" (see also D1, col. 4, par.4). Since the access channel ref. 29 according to D1 houses the sealing member in permanent/direct contact with the engagement portion of the key member (actuating button ref. 56), the subject-matter of claim 1 differs from this known D1-closure in the features of the characterising portion comprising in particular the definition of a removable (recess/protrusion-provided) key member being insertable into an opening of the access channel wherein the sealing member (which is to be actuated by said key member) lies spaced along the access channel from the said "key member insertion"-opening. Therefore, the subject-matter of claim 1 is clearly new (Article 33(2) PCT).

- Inventive step: The problem to be solved by the present invention may be regarded as to provide a safety closure comprising a key member which works similar to known/usual keys (in particular such that only the owner of the key member is enabled to actuate and open the closure). The solution to this problem proposed in claim 1 of the present application (provision of a removable key member with key-type engagement recesses/protrusions being uniquely enabled to engage a channel of the closure thereby moving a distant sealing member into the open position) is neither disclosed/suggested by D1 nor suggested by further available prior art documents; therefore, claim 1 is considered as involving an inventive step, too (Article 33(3) PCT).

- **Industrial applicability:** claim 1 defining a closure is also clearly industrially applicable in the sense of Article 33(4) PCT.

V.2.2) Dependent claims 2-17

Claims 2-17 are dependent on claim 1 and as such also meet the requirements of the PCT as defined under Article 33(1) PCT.

V.3) Further Comments

- Claim 18 should have been omitted and claim 1 should have been further clarified by defining/referring to the "... engagement portion of the key member ...(being) insertable into an opening in the access channel ..." (cf. newly introduced last passage of claim 1 defining/referring merely to the key member as such); moreover, the features of the claims should have been provided with reference signs placed in parentheses (Rule 6.2(b) PCT)

- Relevant background art documents (cf. D1-D3) should have been cited (Rule 5.1(a)(ii) PCT) and the description should have been adapted to the amended claim 1 (comprising from now on formerly optional features of original claim 2); moreover an obvious mistake on page 8, line 4 should have been corrected (figure 11 obviously shows the arrangement of figure 10 in a second operating condition).

CLAIMS:

1. A closure, for a container, comprising a closure member and a key member, the closure member including an opening formed in communication with a concealed sealing member, the sealing member being moveable between a closed position towards which it is resiliently biased and an open position, the opening defining a conduit for at least one of dispensing the contents of the container or adding contents to the container; the closure member further including an access channel in communication with the sealing member; and the key member including an engagement portion that is co-operable with the access channel whereby the engagement portion is moveable within the access channel, so as to move the sealing member into the open position when the closure member and the key member are releasably engaged together, characterised in that the key member is removable, and in that one of the engagement portion and the access channel includes at least one protrusion and the other of the engagement portion and the access channel includes at least one co-operable first recess, the co-operation between the protrusion and the recess being such as to provide a uniquely keyed combination of the key member and the closure member; the arrangement being further characterised in that the key member is insertable into an opening in the access channel at a location remote from the sealing member which lies spaced, along the access channel, from the said opening.

2. A closure according to Claim 1 wherein one of the engagement portion and the access channel includes at least one second recess in communication with a respective first recess and extending at an angle therefrom, the or each second recess including an elongate member moveably secured therein, the elongate member extending through one of the engagement portion and the closure member whereby the elongate

member is moveable by a respective protrusion into engagement with the sealing member, so as to move the sealing member into the open position, when the closure member and the key member are releasably engaged together.

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3. A closure according to any preceding claim wherein the closure member is formed integrally with the container; and/or removably or fixedly secured to the container.

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4. A closure according to Claim 3 wherein the container includes a tamper-evident member disposed between the closure member and the container.

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5. A closure according to any preceding claim wherein one of the closure member and the key member includes at least one first engagement member and the other of the closure member and the key member includes at least one further engagement member that is engageable with the first engagement member, so as to permit the releasable engagement of the key member and the closure member when the sealing member is in at least one

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6. A closure according to any preceding claim wherein the closure member includes a shield member that conceals the sealing member, the shield member permitting the dispensing of the contents of the container or the addition of contents to the container, but preventing a person from moving the sealing member via the conduit.

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7. A closure according to Claim 6 wherein the shield member is secured within the conduit.

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8. A closure according to Claim 6 wherein the shield member includes at least one leg extending therefrom, the or each leg being receivable within a respective cavity in the sealing member, whereby the shield member is moveable against a biasing force between a position displaced from the sealing member and a position adjacent to the sealing member.

9. A closure according to Claim 8 wherein at least one said leg includes a first locking member that is engageable with a further locking formation in a said cavity, whereby the shield member is lockable in the position adjacent to the sealing member so as to prevent movement of the sealing member to the open position.

10. A closure according to either of Claims 8 or 9 wherein the conduit includes at least one retention member, the or each retention member preventing removal of the shield member.

11. A closure according to any preceding claim wherein the sealing member includes a substantially rigid frame, the frame including at least one spring member protruding therefrom, the or each spring member resiliently biasing the sealing member towards the closed position.

12. A closure according to Claim 11 wherein the sealing member further includes a first sealing portion co-operable with the conduit in the closure member to seal the conduit, and a second sealing portion arranged to prevent the dispensing of the contents of the container and the addition of contents to the container via the access channel.

13. A closure according to Claim 12 wherein the first sealing portion includes a stopper and the conduit includes a co-operable seal, the stopper and the seal combining to seal the conduit.

14. A closure member according to any preceding claim wherein the closure member has a substantially circular cross-sectional profile and includes a liner; the access channel has a substantially circular cross-section
5 and is disposed between the liner and an outer wall of the closure member; and the engagement portion of the key member defines a hollow tube having a substantially circular cross-section.

15. A closure member according to Claim 14 wherein the key member
10 includes one of a spout; a nozzle; and a nipple.

16. A closure according to any preceding claim wherein the closure member includes a removeable cap.

15 17. A closure according to any preceding claim wherein the closure member includes at least one tamper-evident seal, the or each tamper-evident seal sealing at least one of the opening and the access channel of the closure member.

20 18. A closure according to any preceding claim wherein the sealing member is or includes a lift valve.